NETWARS WIPT

NETWARS Standard BNF/ Model Documentation

July 20, 2005

Agenda

- NETWARS Standard BNF Background
- BNF “Best Practices”
  - Know the BNF- meta data categories, structure
  - Know how to utilize the BNF
  - Utilize model templates
  - Model examples
- Next Steps
  - Update the BNF
  - Review NETWARS model documentation templates

NETWARS Standard BNF Background

- **Empirical data and user feedback identified flaws in the current embedded model documentation**
- **A&S WIPT community identified a standard syntax that describes a structured, consistent, and detailed format for NETWARS model documentation in a BNF formalism**
- **WIPT community identified a desire to have a repeatable maintainable mechanism to document NETWARS standard models.**

BNF “Best Practices”

Methodology: The BNF provides a flexible framework that can be utilized in a variety of ways

- **Know the BNF Meta data categories and Meta data content**
- **Utilize the BNF for model data requirements gathering**
- **Utilize the BNF to provide and organized structure to your embedded model documentation**

Meta Data Categories

1. Model Header - Provides a general model description
2. Failure Recovery - Describes the model support for this required capability
3. Developer Notes – Provide descriptive model information that model developers find useful
4. Analyst Notes – Provides descriptive model information that NETWARS Analyst need.
5. Comments

BNF Structure

Meta Data Categories

```
1.  {Model Header:= } <Model name> <General Description>
    {Model name:= } <device name > <device extension>
    {device extension:=} <.nd.m>|<nd.d>
    {General Description:=} <Annotation> | <OSI layer> <Interface list>
                            <Traffic list> <Model history>

2.  {Failure Recovery Support =:} <F_R Support> | <NONE>
    {F_R Support:=} <Text based description of
                    device failure and recovery.>

3.  {Developer Notes:=} <ICI Formats> <External Files Needed>
                        <Process Models> <Pipeline Stages> | <NONE>
    {ICI Formats:=} <Format List> |<none>
    {External Files Needed=:}  <Header Files list> | <Source Code list>
                               | <Aux File list> | <None>
    {Header Files List=:} <Strings>
    {Process Models=:} <Strings>
    {Pipeline Stage=:} <Strings>

4.  {Military Analyst Notes:=} <Model Usage> | <Exceptions and Elaborations>
                               | <Military Analyst Notes …> | <NONE>
    {Model Usage :=} <Text based description of the model usage>
    {Exceptions and Elaborations:=} <Text based description of the exceptions and
                                     limitations of the model>
    {Military Analyst Notes :=} <Strings>

5.  {Comments:=} <Edit History> | <Model Limitations> |
                 <External Documentation> | <Free Comments>
    {Edit History :=} <Edit History>
    {Edit History List:=} <Software Version Number> <Date> <Author>
    {External Documentation /References:=} <Applicable RFC> | <Document list>
    {Applicable RFC:=} <Strings>
    {Document list:=} <Document Title> <Document Date>
    {Model Limitations :=} <Strings>
    {Free Comments:=} <Strings>
```

BNF Structure

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    {Model name:= } <device name > <device extension>
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    {External Documentation /References:=} <Applicable RFC> | <Document list>
    {Applicable RFC:=} <Strings>
    {Document list:=} <Document Title> <Document Date>
    {Model Limitations :=} <Strings>
    {Free Comments:=} <Strings>
```

Meta Data Content

BNF Structure

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    {device extension:=} <.nd.m>|<nd.d>
    {General Description:=} <Annotation> | <OSI layer> <Interface list>
                            <Traffic list> <Model history>

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    {F_R Support:=} <Text based description of
                    device failure and recovery.>

3.  {Developer Notes:=} <ICI Formats> <External Files Needed>
                        <Process Models> <Pipeline Stages> | <NONE>
    {ICI Formats:=} <Format List> |<none>
    {External Files Needed=:}  <Header Files list> | <Source Code list>
                             | <Aux File list> | <None>
    {Header Files List=:} <Strings>
    {Process Models=:} <Strings>
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    {External Documentation /References:=} <Applicable RFC> | <Document list>
    {Applicable RFC:=} <Strings>
    {Document list:=} <Document Title> <Document Date>
    {Model Limitations :=} <Strings>
    {Free Comments:=} <Strings>
```

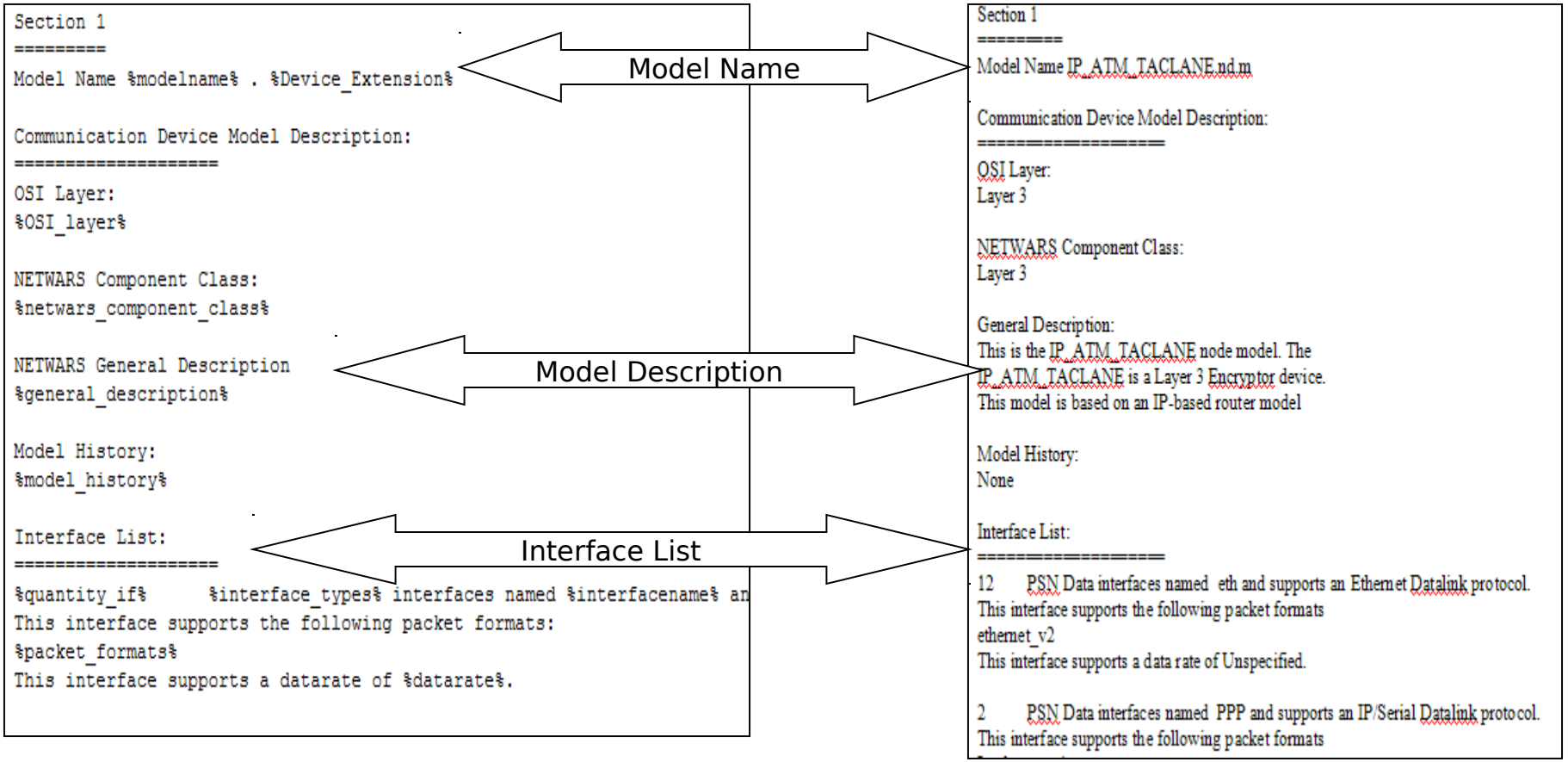
Content Description

Review NETWARS Model Documentation Templates

NETWARS standard model templates

1. **Section 1:**
   Communication Device Model Description:
   Interface List
   Wireless Support:
   OSI Layer 2 and 3
   Supported Multi-access Schemes
   Supported Multiplexing Schemes
   Configurable Attributes
   Supported Traffic
2. **Section 2:**
   Failure Recovery Support
3. **Section 3:**
   Developer Notes
4. **Section 4:**
   Model Fidelity
5. **Section 5:**
   Military Analyst Notes
6. **Section 6:**
   Comments
   External Documentation References

Model Documentation Examples



Template

IP_ATM_Taclane

Model Documentation Examples

1. IP_ATM_TACLANE
2. USC-65_V1_Ku_Band

Next Steps

1. Proposed updates to the BNF
2. Review / Update model documentation templates